

AMENDMENTS TO THE CLAIMS

1-49. (Canceled)

50. (Currently amended) A metal cluster nanocompound of transition metals, comprising a metal core and at least one ligand, and physiologically tolerated salts, wherein at least one of the group consisting of the average size of the metal core of said metal cluster nanocompounds, the electronegativity of said metal cluster nanocompounds, and the stabilization energy ΔE^{stab} is selected to enable said metal cluster nanocompounds to interact with the DNA under physiological conditions, for the prophylactic and/or therapeutic treatment of neoplastic and cancerous disorders of the human or animal body, wherein the metal cluster nanocompound has the general formula (II)



(II)

where L' denotes identical or different ligands in the same molecule and is selected from the group consisting of: a triphenylphosphine radical, ~~derivatives of triphenylphosphine~~, $\text{P}(\text{C}_6\text{H}_5)_2(\text{C}_6\text{H}_4\text{SO}_3\text{H})$, and $\text{P}(\text{C}_6\text{H}_5)_2(\text{meta-}\text{C}_6\text{H}_4\text{SO}_3\text{H})$;

X is a halogen atom and may denote identical or different halogen atoms in the same molecule;

physiologically tolerated salts thereof; and

suitable formulated for the prophylactic and/or therapeutic treatment of neoplastic and cancerous disorders of the human or animal body.

51. (Previously presented) The metal cluster nanocompound as claimed in claim 50, having a water solubility of at least 0.1 $\mu\text{mol/l}$.

52. (Currently amended) The metal cluster nanocompound as claimed in claim 50, formulated for the ~~prophylactic and/or~~ therapeutic treatment of neoplastic or cancerous disorders of the human or animal body, selected from the group consisting of primary tumors, metastasized tumors, precancerous diseases, colon cancer, colon carcinomas, breast cancers, mamma carcinomas, ovarian carcinomas, carcinomas of the uterus, lung cancer, stomach cancer, liver cancer, carcinomas of the pancreas, kidney cancer, bladder cancer, prostate cancer, testicular cancer, bone cancer, skin cancer, Kaposi sarcomas, brain tumors, myosarcomas, neuroblastomas, lymphomas and leukemias.

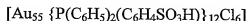
53. (Currently amended) The metal cluster nanocompound as claimed in claim 50 formulated for the ~~prophylactic and/or~~ therapeutic treatment of benign and malignant tumors.

54. (Previously presented) The metal cluster nanocompound as claimed in claim 50, which inhibits and/or stops cell growth and/or cell division of tumor and/or cancer cells and/or which induces destruction of tumor and/or cancer cell DNA.

55. (Previously presented) The metal cluster nanocompound as claimed in claim 50, formulated to be administered systemically and/or topically.

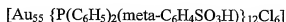
56-60. (Canceled)

61. (Currently amended) The metal cluster nanocompound as claimed in Claim 50 and having the formula



and physiologically tolerated salts thereof, formulated for the therapeutic treatment of neoplastic and cancerous disorders of the human or animal body.

62. (Currently amended) The metal cluster nanocompound as claimed in claim 50 of the formula



and physiologically tolerated salts thereof, formulated for the therapeutic treatment of neoplastic and cancerous disorders of the human or animal body .

63. (Currently amended) A metal cluster nanocompound of transition metals, comprising a metal core and at least one ligand, and physiologically tolerated salts thereof, wherein the average size of said metal core of said metal cluster nanocompounds is no more than about 2.5 nm and at least about 0.75 nm so as to enable said metal cluster nanocompounds to interact with DNA of human or animal cells under physiological conditions for the prophylactic and/or therapeutic treatment of neoplastic and cancerous disorders of the human or animal body, wherein the metal cluster nanocompound has the general formula (II)



(II)

where L' denotes identical or different ligands in the same molecule and is selected from the group consisting of: a triphenylphosphine radical, derivatives of triphenylphosphine, $\text{P}(\text{C}_6\text{H}_5)_2(\text{C}_6\text{H}_4\text{SO}_3\text{H})$, and $\text{P}(\text{C}_6\text{H}_5)_2(\text{meta-C}_6\text{H}_4\text{SO}_3\text{H})$;

X is a halogen atom and may denote identical or different halogen atoms in the same molecule;

physiologically tolerated salts thereof; and

suitable formulated for the prophylactic and/or therapeutic treatment of neoplastic and cancerous disorders of the human or animal body.